

THE INFECTIVENESS OF A BIOERODING CLIONID SPONGE. *Memoirs of the Queensland Museum* 44: 540. 1999:- Sponges play a major role in reef bioerosion. Early impressions suggested that only dead coral skeleton was infected. Cores of a very abundant Great Barrier Reef clionid sponge, *Cliona* sp., probably new, were removed with an underwater drill, allowed to heal and fixed onto living surfaces of nine coral spp. at Orpheus Island. Sponge survival varied greatly. It was best on control surfaces of dead massive *Porites*, on live massive *Porites* and on *Astreopora myriophthalma*. It was least on *Lobophyllia hemprichii* and two branching *Porites* spp. Several individuals in seven of the nine coral species were

infected within eight weeks. The areas of infection varied widely. However, after removal of grafts, the sponges died, regardless of their size. The risk of epidemics by fragmentation of this sponge species is considered to be low. □ *Porifera, Cliona, bioerosion, Great Barrier Reef, Coral Sea.*

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WANTED: THE NAMES OF COMMON BIOERODING SPONGES OF THE CENTRAL GREAT BARRIER REEF. *Memoirs of the Queensland Museum* 44: 540. 1999:- Bioeroding sponges have been well studied in the Mediterranean and the Caribbean Seas. Only few bioeroding sponge species are properly described from the Australian Great Barrier Reef. All other descriptions of Australian species are based on von Lendenfeld (1884-85) and de Laubenfels (1954). Detailed surveys in the central section of the Great Barrier Reef resulted in a large amount of new reference material suitable for revisions and new descriptions. Field descriptions and preliminary studies of spicule mounts made it possible to clearly distinguish 15 species from the rest of the samples, which are harder to categorise. Some of the sampled species appear to be sponges described

previously and occurring in other oceans, some new species are likely to be endemic to the Coral Sea. Descriptions of the most common species are presented with preliminary names, distinguishing morphological features, and spicule assemblages with a request that participants assist by comparing with species they are familiar with or have observed elsewhere. □ *Porifera, Cliona, Clionothosa, Aka, bioerosion, Great Barrier Reef, Coral Sea, taxonomy.*

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FRESHWATER SPONGES (PORIFERA: SPONGILLIDAE) OF THE GUANACASTE CONSERVATION AREA, COSTA RICA: A PRELIMINARY SURVEY. *Memoirs of the Queensland Museum* 44: 540. 1999:- A survey of freshwater sponges in the Guanacaste Conservation Area (GCA), NW Costa Rica, was conducted in August and December of 1996 and March of 1997. The GCA occupies 110,000 hectares and includes Pacific dry forest, cloud forest and Atlantic rain forest. Objectives were to find out what sponges occur in the GCA, their distribution and preferred habitats. Sites were chosen to represent aquatic habitats from each biome in the GCA. At each site water temperature, pH, specific conductance and current velocity were measured. A unique aspect of this project entailed the measurement of particulate organic carbon (POC). POC can be useful for estimating food availability and has not been used to describe habitat preferences of freshwater sponges. To estimate POC, methods outlined by Wetzel & Likens (1979) were used.

Listed in order of decreasing frequency, the following taxa were observed: *Radiospongilla* sp., *Dosilia* sp., *Corvomeyenia* sp., *Spongilla cenota*, *Trochospongilla* sp., and unidentifiable colonies without gemmules. The *Radiospongilla* species is currently being described in a separate paper (Poirrier, in prep.), and

prior to this survey, *Spongilla cenota* was known only as far south as Florida and Mexico and therefore represents a significant range extension and a new record for Central America. The other genera are of uncertain taxonomic position and will be considered in a future paper. Sponges in the GCA were restricted to temporary, slow moving streams and ponds in dry tropical forest. These habitats have a drought season of up to six months and have POC content greater than 560g/l. No sponges were found in the clear, fast, permanent streams of the cloud and rain forests. Due to the high volume of fast flowing water, POC values are extremely low in these streams. These data suggest that natural aquatic habitats within evergreen tropical forests do not provide adequate food for freshwater sponges and that more favourable habitats are found in the dry tropical forest biome. This may be an important point for the conservation of Central American freshwater sponges, because dry tropical forest is considered the most endangered of all tropical ecosystems. □ *Porifera, Costa Rica, ecology, habitat, POC, Spongillidae, taxonomy, conservation.*

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